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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,938	12/08/2003	Sachiko Nemoto	5243-002-US01	8989

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EXAMINER	
RIVAS, SALVADOR E	
ART UNIT	PAPER NUMBER
2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,938	NEMOTO ET AL.	
	Examiner	Art Unit	
	SALVADOR E. RIVAS	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 13, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Patenaude** (**U.S. Patent Application Publication # 2004/0076168 A1**) in view of **Zelig et al.** (**U.S. Patent Application Publication # 2002/0110087 A1**), and further in view of **Yu** (**U.S. Patent Application Publication # 2001/0043603 A1**).

Regarding **claim 1**, Patenaude teaches an interface device (Fig.8), comprising:

an Ethernet frame and a SONET frame convertible interface device (Fig.7b @ 700b, Fig.8 @ 800),

wherein a 1st holding part (Fig.8 @ 804) with a specific VLAN identifier of said Ethernet frame and a STS path identifier of said SONET frame are placed opposite each other; ("Packet mapper 804 may support virtual concatenation (VC) for compatibility with the installed SONET/SDH network infrastructure, and may enable the use of various traffic segregation methods, for example, stacked virtual local area networks (VLANs), multi-protocol label switching (MPLS) labels, and VT1.5 and/or STS-1 Ethernet-over-SONET (EoS) mapping." Paragraph [0041]),

a filtering part (Fig.8 @ 806; "The present invention may include traffic shaping, which may be supported by the policing, shaping, flow control and subscriber

management functionality represented by functional block 806." (Paragraph [0045]) Furthermore, "... the policing, shaping, flow control and subscriber management functionality represented by block 806 may support intelligent traffic shaping, which may guarantee minimum latency for delay-sensitive traffic such as packet voice." Paragraph [0046] Lines 1-5),

and said filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806)) breaks down (read as intelligent traffic shaping) the frame when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute "Discretionary traffic shaping may be based on flow/priority type, and may permit traffic shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network management and SLA conformance purposes. Key benchmarks in such agreements may be latency, latency variation and

data loss, and such parameters may be measured by an embodiment of the present invention. Other statistics that may be collected include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth, buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

However, Patenaude fail to explicitly teach a multiplexing part operable to multiplex an Ethernet frame having said specific VLAN identifier corresponding to said specific STS path identifier that is held by said 1st holding part among a plurality of input Ethernet frame VLAN identifiers;

wherein the multiplexing part establishes a filtering part that passes through Ethernet frames having said specific VLAN identifier among a plurality of Ethernet frames and a 1st encapsulating part that encapsulates information data contained in an Ethernet frame.

Zelig et al. teaches a multiplexing part (read as switch labeled "MUX A" (Fig.1 @ 26)) capable of multiplexing an Ethernet frame having said specific VLAN identifier (MUX A "multiplexes … different Ethernet ports 28 of the switch and having different VLAN addresses 30", paragraph [0052], Line 10-12) corresponding to said specific STS path identifier that is held by said 1st holding part among a plurality of input Ethernet frame VLAN identifiers ("Switch 26 now registers the requested service in a service table it maintains and sends a signaling message regarding the service …" (paragraph [0055], Line 1-3) which may contain the type of service (e.g. SONET over MPLS) and/or may contain an "additional index … to the signaling message to specify the

range of VLANs for Ethernet services, or the number of the SONET path for SONET signals at both ends of the connection" (paragraph [0055], Line 16-20)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the multiplexing function as taught by Zelig et al. within ADM system with Ethernet/SONET conversion capabilities as taught by Patenaude for the purpose of mapping a plurality of Ethernet frames to a one STS signal and vice versa.

However, Patenaude and Zelig et al. wherein the multiplexing part establishes a filtering part that passes through Ethernet frames having a specific VLAN identifier among a plurality of Ethernet frames and

a 1st encapsulating part that encapsulates information data contained in an Ethernet frame that passes through a filtering part.

Yu teaches a transmission method and apparatus (Fig.9) for "… transmitting data packets from an upper layer side device to a lower layer side device." (Paragraph [0022] Lines 1-3) Furthermore, Yu teaches wherein the multiplexing part establishes a filtering part (read as a packet adapt function) that passes through Ethernet frames having a specific VLAN identifier among a plurality of Ethernet frames ("receiving and buffering the data packets from said upper layer side device, adapting the rate of said upper layer side device to the rate of said lower layer side device, …" Paragraph [0022] Lines 4-7) and

a 1st encapsulating part that encapsulates information data contained in an Ethernet frame.("encapsulating said first type of frames to form a second type of frames

containing a SAPI field including a SAPI identifier and an information field including said data packets;" Paragraph [0022] Lines 8-10)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the functions for adapting and encapsulating a data packet as taught by Yu and the VLAN ID mapping table as taught by Zelig et al. to modify the interface system with Ethernet/SONET conversion capabilities taught by Patenaude for the purpose of efficiently mapping a plurality of Ethernet frames to a one STS signal and vice versa.

Regarding **claim 2**, and **as applied to claim 1 above**, Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3)

Zelig et al. teach "a plurality of intermediate nodes that are configured to operate as label-switched routers so as to provide first and second label-switched tunnels between the first and second access nodes,..."(Paragraph [0047])

However, Patenaude and Zelig et al. fail to teach wherein the multiplexing part establishes an ID inserting part that inserts an opposing SONET transmission device STS path identifier that opposes an Ethernet frame that is encapsulated by a 1st encapsulating part.

Yu teaches a transmission method and apparatus (Fig.9) for "... transmitting data packets from an upper layer side device to a lower layer side device." (Paragraph [0022] Lines 1-3) Furthermore, Yu teaches an interface device (read as ADM (Fig.9, Fig.15)) wherein the multiplexing part establishes an ID inserting part that inserts an opposing

SONET transmission device STS path identifier that opposes an Ethernet frame that is encapsulated by a 1st encapsulating part (Paragraph [0022] Lines 8-10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the functions for adapting and encapsulating a data packet as taught by Yu and the VLAN ID mapping table as taught by Zelig et al. to modify the interface system with Ethernet/SONET conversion capabilities taught by Patenaude for the purpose of efficiently mapping a plurality of Ethernet frames to a one STS signal and vice versa.

Regarding **claim 3**, Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3) Furthermore, Patenaude teaches a SONET multiplex isolation device (Fig.3 @ ADM) wherein a filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806 , Paragraph [0045], Paragraph [0046] 1-5)) breaks down (read as intelligent traffic shaping) the frame when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute

"Discretionary traffic shaping may be based on flow/priority type, and may permit traffic shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network management and SLA conformance purposes. Key benchmarks in such agreements may be latency, latency variation and data loss, and such parameters may be measured by an embodiment of the present invention. Other statistics that may be collected include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth, buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

Zelig et al. teach "a plurality of intermediate nodes that are configured to operate as label-switched routers so as to provide first and second label-switched tunnels between the first and second access nodes,..."(Paragraph [0047])

However, Patenaude and Zelig et al. fail to teach wherein the multiplexing part establishes a flag inserting part that inserts a flag that indicates an input side Ethernet frame transmission fault in an Ethernet frame that is encapsulated by a 1st encapsulating part

Yu teaches a transmission method and apparatus (Fig.9) for "... transmitting data packets from an upper layer side device to a lower layer side device." (Paragraph [0022] Lines 1-3) Furthermore, Yu teaches a SONET multiplex isolation device (read as ADM (Fig.9, Fig.15)) wherein the multiplexing part establishes a flag inserting part that inserts a flag that indicates an input side Ethernet frame transmission fault in an Ethernet frame

that is encapsulated by a 1st encapsulating part (Paragraph [0020] Lines 16-20, Paragraph [0119]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the functions for adapting and encapsulating a data packet as taught by Yu and the VLAN ID mapping table as taught by Zelig et al. to modify the interface system with Ethernet/SONET conversion capabilities taught by Patenaude for the purpose of efficiently mapping a plurality of Ethernet frames to a one STS signal and vice versa.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yu** (**U.S. Patent Application Publication # 2001/0043603 A1**), in view of **Kong et al.** (**US Patent # 2002/0176450 A1**), and further in view of **Patenaude** (**U.S. Patent Application Publication # 2004/0076168 A1**).

Regarding **claim 4**, Yu teaches a transmission system (Fig. 15) (read as a transmission method and apparatus for "… transmitting data packets from an upper layer side device to a lower layer side device." Paragraph [0022] Lines 1-3), comprising:

a plurality of SONET multiplex isolation devices (read as ADM devices (Fig.9, Fig.15)) having Ethernet interface devices (Paragraph [0014]) and SONET interface devices (Paragraph [0015]) established (Paragraph [0083]),

wherein a 1st SONET multiplex isolation device (Fig.15) among the plurality of SONET multiplex isolation devices (read as ADM devices (Fig.9, Fig.15)) establishes a 1st holding part (read as a buffering device (Fig.9 @ 8, 13)) with a Ethernet frame specific VLAN identifier and a SONET frame specific STS path identifier placed

opposite each other ("… receiving and buffering the data packets from said upper layer side device, adapting the rate of said upper layer side device to the rate of said lower layer side device, …" Paragraph [0022] Lines 4-7);

a multiplexing part (Fig.9, Fig.13) that multiplexes a plurality of Ethernet frames having a specific VLAN identifier corresponding to the specific STS path identifier that is held in the 1st holding part (read as FIFO (Fig.9 @ 8, 13)) among an input plurality of Ethernet frame VLAN identifiers ("converting said data packets to a first type of frames;" Paragraph [0022] Lines 4-7),

along with a 2nd SONET multiplex isolation device (read as ADM (Fig.15)) among the plurality of SONET multiplex isolation devices (read as ADM (Fig.9, Fig.15)) with a 2nd holding part (Fig.9 @ 8, 13) with the SONET frame specific STS path identifier and Ethernet frame specific VLAN identifier placed opposite each other ("… apparatus for providing a point-to-point full-duplex simultaneous bi-directional operation for connecting physical layer side device and network layer side device, for example, connecting Ethernet Switches and a SDH/SONET network." Paragraph [0019] Lines 2-6); and

wherein the 1st SONET multiplex isolation device (read as an ADM (Fig.9, Fig.15)) multiplexing part inserting a flag that indicates an input side Ethernet frame transmission fault along with the 2nd SONET multiplex isolation device isolation part (read as an ADM (Fig.9, Fig.15)) that prevents output of an Ethernet frame that is transmitted by detection of the flag from a frame originating in the SONET frame ("For the purpose of determining whether or not the bit error rate of the received signal is

above or below two different provisionable thresholds, the EOS apparatus provides two B2 error rate threshold blocks. The Signal Fail (SF) and the Signal Degrade (SD) conditions are reported when thresholds are exceeded via interrupts." Paragraph [0119]).

However, fails to teach an isolation part that imparts a VLAN identifier corresponding to the STS path identifier that is held in the 2rid holding part to each extracted Ethernet frame by extracting each Ethernet frame and the SONET frame STS path identifier from a frame originating in the SONET frame

Kong et al. teach mapping mechanisms (Fig.3) ("... tagged method of the Ethernet frame using VCL or VLAN tag (see FIG. 6)" (paragraph [0059], Lines 19-21) that may be applied as an "... index variable in a table that will provide the channel number ..." (paragraph [0062], Lines 13-14)) to establish a communication path to carry Ethernet signals over a SONET/SDH network (Paragraph [0014]). Furthermore, Kong et al. teach an isolation part that imparts a VLAN identifier corresponding to the STS path identifier that is held by the 2nd holding part to an extracted plurality of Ethernet frames by extracting each Ethernet frame and the SONET frame STS path identifier from a frame originating in SONET frames with a multiplexed plurality of Ethernet frames ("...mapping mechanisms in FIG. 3 works for traffic flowing in both directions. The key for the inverse mapping from SONET payload to Ethernet ports is to map SONET signal correctly to a Ethernet port.", paragraph [0062], Lines 1-4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the VLAN tagging and mapping

mechanisms applied to Ethernet frames as taught by Kong within the ADM devices as taught by Yu for the purpose of efficiently establishing communication between a telecom SDH/SONET transmission device and a remote access datacom device by adapting MAC frame directly to SDH/SONET and vice versa.

However, Yu and Kong fail to explicitly teach a filtering part that breaks down a frame when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part.

Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3) Furthermore, Patenaude teaches a SONET multiplex isolation device (Fig.3 @ ADM) wherein a filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806 , Paragraph [0045], Paragraph [0046] 1-5)) breaks down (read as intelligent traffic shaping) the frame when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute "Discretionary traffic shaping may be based on flow/priority type, and may permit traffic

shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network management and SLA conformance purposes. Key benchmarks in such agreements may be latency, latency variation and data loss, and such parameters may be measured by an embodiment of the present invention. Other statistics that may be collected include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth, buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ Ethernet/SONET conversion capabilities and policing, shaping, flow control and subscriber management functionalities as taught by Patenaude and the VLAN tagging and mapping mechanisms applied to Ethernet frames as taught by Kong within the ADM devices as taught by Yu for the purpose of efficiently establishing communication between a telecom SDH/SONET transmission device and a remote access datacom device by adapting MAC frame directly to SDH/SONET and vice versa.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yu** (**U.S. Patent Application Publication # 2001/0043603 A1**), in view of **Zelig et al.** (**U.S. Patent Application Publication # 2002/0110087 A1**), and further in view of **Patenaude** (**U.S. Patent Application Publication # 2004/0076168 A1**).

Regarding **claim 5**, Yu teaches a frame transmission method for frame transmission for an Ethernet flame and SONET frame (Fig.9), except for inputting a plurality of Ethernet frames having a specific VLAN identifier among the plurality of Ethernet frames passes through to be multiplexed.

Zelig et al. teaches a multiplexing part (read as switch labeled "MUX A" (Fig.1 @ 26)) capable of multiplexing an Ethernet frame having said specific VLAN identifier (MUX A "multiplexes … different Ethernet ports 28 of the switch and having different VLAN addresses 30", paragraph [0052], Line 10-12) corresponding to said specific STS path identifier that is held by said 1st holding part among a plurality of input Ethernet frame VLAN identifiers ("Switch 26 now registers the requested service in a service table it maintains and sends a signaling message regarding the service …" (paragraph [0055], Line 1-3) which may contain the type of service (e.g. SONET over MPLS) and/or may contain an "additional index … to the signaling message to specify the range of VLANs for Ethernet services, or the number of the SONET path for SONET signals at both ends of the connection" (paragraph [0055], Line 16-20)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the VLAN ID session map as taught by Zelig et al. within the transmission apparatus of Yu for the purpose of transmitting data packets from an upper layer side device to a lower layer side device. (Paragraph [0022] Lines 1-3).

However, Yu and Zelig et al. fail to explicitly teach breaking down a frame using a filtering part when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part.

Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3) Furthermore, Patenaude teaches a SONET multiplex isolation device (Fig.3 @ ADM) breaking down (read as intelligent traffic shaping) a frame using a filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806 , Paragraph [0045], Paragraph [0046] 1-5)) when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute "Discretionary traffic shaping may be based on flow/priority type, and may permit traffic shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network

management and SLA conformance purposes. Key benchmarks in such agreements may be latency, latency variation and data loss, and such parameters may be measured by an embodiment of the present invention. Other statistics that may be collected include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth, buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ Ethernet/SONET conversion capabilities and policing, shaping, flow control and subscriber management functionalities as taught by Patenaude and the VLAN ID mapping table as taught by Zelig et al. within the ADM devices as taught by Yu for the purpose of efficiently establishing communication between a telecom SDH/SONET transmission device and a remote access datacom device by adapting MAC frame directly to SDH/SONET and vice versa.

Conclusion

5. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or early communications from the Examiner should be directed to Salvador E. Rivas whose telephone number is (571)

270-1784. The examiner can normally be reached on Monday-Friday from 7:30AM to 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Chirag G. Shah can be reached on (571) 272- 3144. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Salvador E. Rivas
S.E.R./ser

May 5, 2009

/Gregory B Sefcheck/

Primary Examiner, Art Unit 2419

5-6-2009